

Power Splitter/Combiner

ZFSCJ-2-2-S

2 Way-180° 50Ω 0.01 to 20 MHz



Generic photo used for illustration purposes only

CASE STYLE: K18

Connectors Model

SMA ZFSCJ-2-2-S

BRACKET (OPTION "B")

Maximum Ratings

Operating Temperature -55°C to 100°C

Storage Temperature -55°C to 100°C

Power Input (as a splitter) 1W max.

Internal Dissipation 0.125W max.

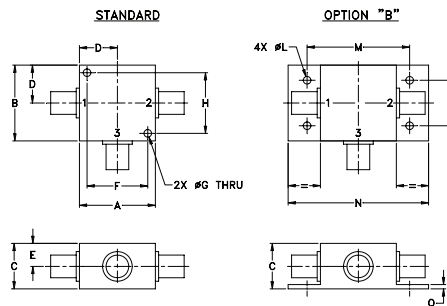
At low range frequency band (f_L to $10 f_L$), linearly derate maximum input power by 13 dB.

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

SUMPORT	3
PORT 1	1
PORT 2	2

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	1.00	.125	1.000
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40
J	K	L	M	N	P	Q	wt
--	--	.125	1.688	2.18	.75	.07	grams
--	--	3.18	42.88	55.37	19.05	1.78	70.0

Features

- low insertion loss, 0.2 dB typ.
- high isolation, 30 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 0.5 deg. typ.
- good VSWR, 1.15:1 typ.
- rugged shielded case

Applications

- HF
- signal processing
- radio communication

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 3.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
	Typ.	Min	Typ.	Min	Typ.	Min	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
f_L - f_U																		
0.01-20	35	25	30	25	25	18	0.3	0.8	0.2	0.5	0.3	0.6	1*	2	2.5	0.1	0.1	0.2

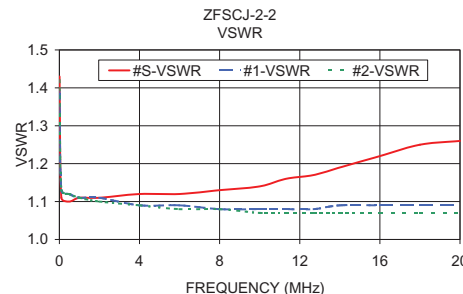
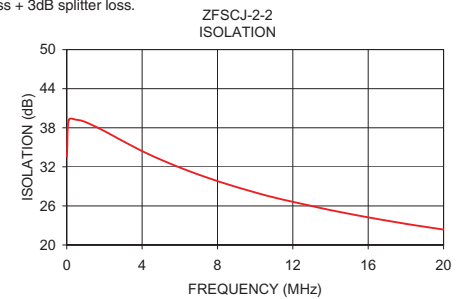
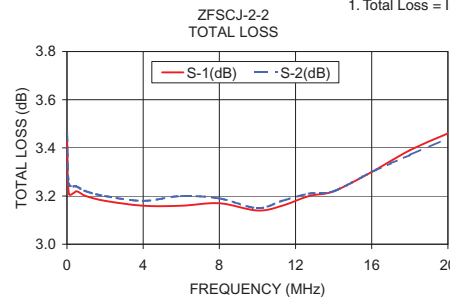
L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

* Phase unbalance is 3 degrees max from f_L to $3f_L$

Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
0.01	3.43	3.46	0.03	33.63	180.30	1.43	1.39	1.42
0.10	3.21	3.25	0.04	39.14	180.30	1.11	1.13	1.13
0.50	3.22	3.24	0.02	39.23	180.20	1.10	1.12	1.12
1.00	3.20	3.22	0.02	38.87	180.20	1.11	1.11	1.11
2.00	3.18	3.20	0.02	37.49	180.20	1.11	1.11	1.10
4.00	3.16	3.18	0.03	34.41	180.10	1.12	1.09	1.09
6.00	3.16	3.20	0.04	31.89	180.00	1.12	1.09	1.08
8.00	3.17	3.19	0.02	29.81	180.00	1.13	1.08	1.08
10.00	3.14	3.15	0.01	28.07	180.00	1.14	1.08	1.07
11.30	3.16	3.18	0.02	27.08	179.90	1.16	1.08	1.07
12.70	3.20	3.21	0.01	26.18	179.90	1.17	1.08	1.07
14.00	3.22	3.22	0.00	25.35	179.80	1.19	1.09	1.07
16.00	3.30	3.30	0.00	24.24	179.70	1.22	1.09	1.07
18.00	3.39	3.37	0.02	23.24	179.60	1.25	1.09	1.07
20.00	3.46	3.44	0.02	22.36	179.50	1.26	1.09	1.07

1. Total Loss = Insertion Loss + 3dB splitter loss.



electrical schematic



Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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2 Way-180° Power Splitter/Combiner

ZFSCJ-2-2

Typical Performance Data

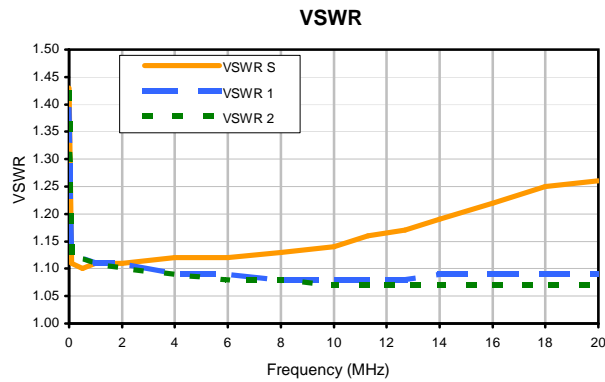
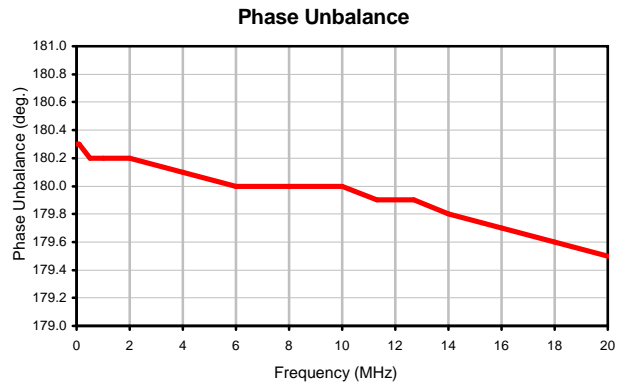
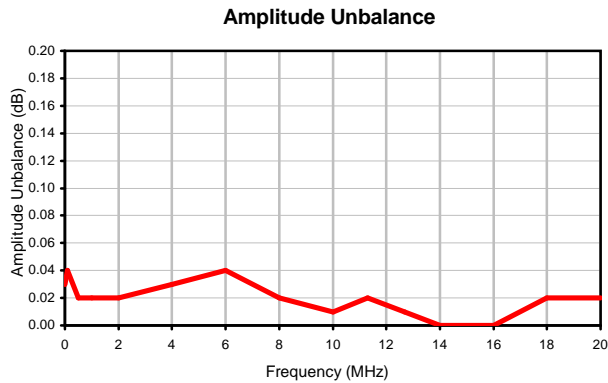
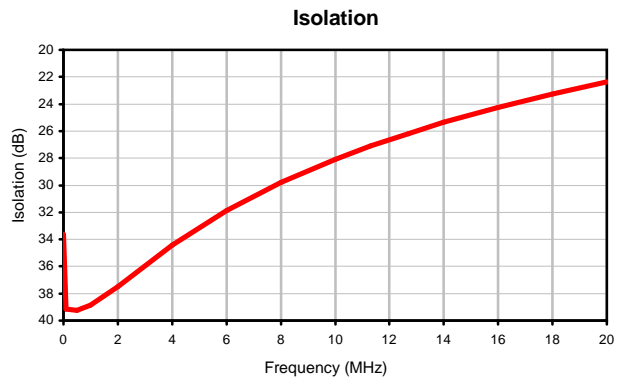
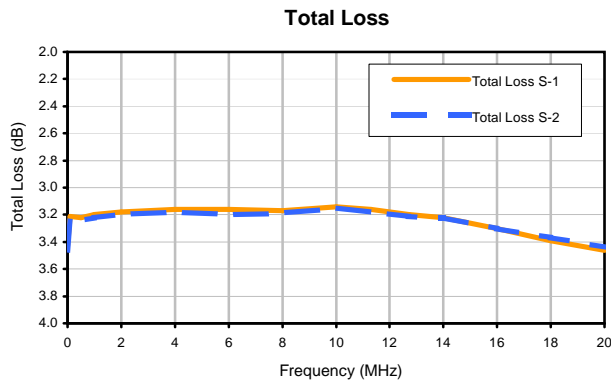
FREQ. (MHz)	TOTAL LOSS ¹ (dB)		AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
0.01	3.43	3.46	0.03	33.63	180.30	0.01	1.43	1.39	1.42
0.10	3.21	3.25	0.04	39.14	180.30	0.10	1.11	1.13	1.13
0.50	3.22	3.24	0.02	39.23	180.20	0.50	1.10	1.12	1.12
1.00	3.20	3.22	0.02	38.87	180.20	1.00	1.11	1.11	1.11
2.00	3.18	3.20	0.02	37.49	180.20	2.00	1.11	1.11	1.10
4.00	3.16	3.18	0.03	34.41	180.10	4.00	1.12	1.09	1.09
6.00	3.16	3.20	0.04	31.89	180.00	6.00	1.12	1.09	1.08
8.00	3.17	3.19	0.02	29.81	180.00	8.00	1.13	1.08	1.08
10.00	3.14	3.15	0.01	28.07	180.00	10.00	1.14	1.08	1.07
11.30	3.16	3.18	0.02	27.08	179.90	11.30	1.16	1.08	1.07
12.70	3.20	3.21	0.01	26.18	179.90	12.70	1.17	1.08	1.07
14.00	3.22	3.22	0.00	25.35	179.80	14.00	1.19	1.09	1.07
16.00	3.30	3.30	0.00	24.24	179.70	16.00	1.22	1.09	1.07
18.00	3.39	3.37	0.02	23.24	179.60	18.00	1.25	1.09	1.07
20.00	3.46	3.44	0.02	22.36	179.50	20.00	1.26	1.09	1.07

¹ Total Loss = Insertion Loss+ 3dB Splitter Loss

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Typical Performance Curves



REV. X2
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100627
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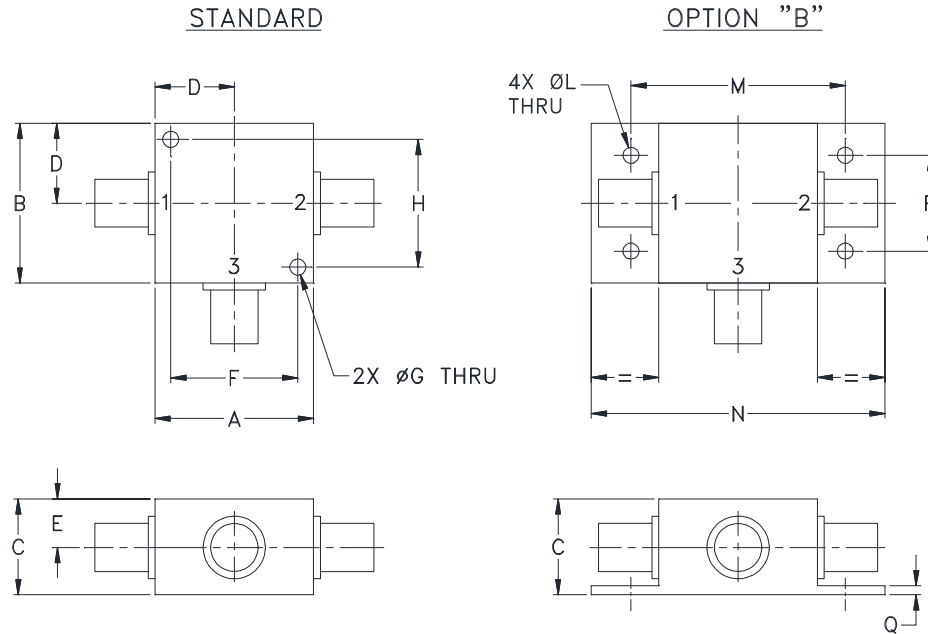
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Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
K18	1.25 (31.75)	1.25 (31.75)	.75 (19.05)	.63 (16.00)	.38 (9.65)	1.000 (25.40)	.125 (3.18)	1.000 (25.40)	--	--	.125 (3.18)	1.688 (42.88)	2.18 (55.37)

CASE#	P	Q	WT. GRAMS
K18	.75 (19.05)	.07 (1.78)	70.0

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

1. Case material: Aluminum alloy.
2. Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
3. Mounting bracket available on request. Add suffix B to part number.
4. For port marking 1, 2, and 3 see specifications data sheet.
5. For bracket version, option B, dimension "C" changes from .75 to .94 inches when connectors are type N.
6. Refer to the individual model data sheet for the type of connectors available.

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Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I